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ABSTRACT

Teaching load depends on many variables, however most colleges define it strictly in terms of contact or credit hours. The failure to give weight to variables such as number of preparations, number of students served, committee and other noninstructional assignments is usually due to the lack of a formula that will quantify the effects of these variables. Virginia Western Community College has developed two formulas for quantifying faculty workloads. One was developed by a faculty committee and the other by the Institutional Research Office. The guidelines and formulas for both models are presented, and a comparison of the formulas is conducted using actual samples of faculty workloads. Both formulas were judged as being sufficiently easy to apply, but often the workload classification of a faculty member would depend upon which formula was used. Further study to determine the feasibility of the formulas is recommended. Sample workload calculations for thirty faculty members from various departments are appended. (Author/AH)

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QUANTIFYING FACULTY WORKLOADS

OIR 11-74

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INTRODUCTION AND PURPOSE

Although teaching load is generally recognized as a function of many variables, most schools define it strictly in terms of either contact or credit hours. The failure to give weight to other important variables such as the number of preparations, number of students served, committee assignments, and number of advisees is usually due to the lack of a formula that will appropriately quantify the effect of these variables rather than a lack of appreciation for the contributory role of the variables.

In the fall of 1973 Virginia Western Community College's Faculty Forum formed a Faculty Load Committee and assigned it the responsibility of developing a workload formula which would take into consideration the different variables that affect teaching load. The committee completed its report in the spring of 1974, and the Faculty Forum referred the committee's guidelines and recommendations to the administration for review and consideration.

During the course of the Faculty Load Committee's study, simultaneous but independent efforts to construct a faculty workload formula were being conducted by VWCC's Institutional Research Office (IRO). These efforts, made at the request of VWCC's president, Dr. Harold Hopper, actually started as early as fall 1972. Dr. Hopper directed the IRO to develop a program which would provide a continual review of faculty workloads with considerations for class hours, credit hours, number of preparations, etc. The IRO arranged with VWCC's Data Processing Center for the production of a quarterly computer printout showing both divisional and individual faculty workloads with respect to credit hours, contact hours, number of course preparations, and number of

FTE's generated. These printouts proved to be extremely useful as an aid in analyzing VWCC faculty workloads for the 1972-1973 academic year (Houston, 1973). A scale was developed which would quantify the effects of the four variables which were included on the computer workload printouts (Archer, 1974). Using this scale as a prototype, the IRO developed a formula which would also quantify the effects of other variables that contribute to teacher workload.

There are three objectives of this report:

(1) To define the teacher workload formula which was constructed by the Faculty Load Committee (Forum formula).

(2) To define the teacher workload formula which was constructed by the Institutional Research Office (Drew formula).

(3) To test the Forum and Drew formulas by applying them to specific workload cases and by showing how they compare with existing Virginia Community College System workload guidelines.

FINDINGS

VCCS Teacher Workload Guidelines

The Virginia Community College System teacher workload guidelines are outlined in Chapter III in the Virginia Community College System Operating Manual. The guidelines state that 12-15 credit hours are usually required for all full-time faculty each quarter, and that these credit hours are usually equivalent to 15-20 contact hours per week. The guidelines state, however, that the actual number of contact hours should be based on the number of students in the classes and the variations in course preparations (number of new courses, number of different courses, and number of total courses). The Operating Manual suggests that a full-time faculty member who is teaching in the occupational/technical foundation field should generate

at least 15 FTES each quarter while one who is teaching in the liberal arts and sciences should generate at least 20 FTES each quarter.

Although the guidelines refer to the importance of variables other than credit hours, underloads and overloads are alluded to only in terms of credit hours. The guidelines state that a faculty member who teaches less than 15 quarter hours one quarter may be asked to teach more the following quarter, and that no faculty member is to be paid for an overload until after the faculty member has been assigned 45 hours (or equivalent) during the year. At VWCC the guidelines are usually interpreted to mean the following: A teacher's workload for a given quarter is considered to be: (1) an underload if the number of credit hours is below 12 and the number of contact hours is below 15, (2) a normal load if the number of credit hours is between 12 and 15, inclusively, or the number of contact hours is greater than or equal to 15, and (3) an overload if the number of credit hours is above 15. Credit hours assigned to independent study courses are not counted in the computation of overloads.

Faculty Forum Guidelines

The formula recommended by the Faculty Forum for determining teaching workloads is based on the concept of equated hours. The formula is very similar to one which was adopted by Michigan's Alpina Community College (Oosting, 1966). The number of equated hours is computed by adding certain specified amounts to a workload data bank (B). In the Forum formula the number of contact hours is initially placed in B, and then additional amounts are added in order to reflect the contribution of other workload variables. The quantities which are added to B vary both in size and sign. To be precise, the number of equated hours which is used to measure a faculty member's

workload for a given quarter is determined by the Forum formula as follows:

(1) Contact Hours

Add the number of contact hours to the data bank (B). Do not include contact hours which are associated with independent study courses.

(2) Credit Hours

Let Q equal the number of credit hours.

(3) Number of Students

Let SCH equal the number of student class hours. SCH is computed by multiplying the number of students in each class by the number of times the class meets each week and summing over all classes. After determining SCH, multiply Q by C and add the result to B where C is specified as follows:

C = -.1 when SCH $<$ 215
C = 0 when 215 $\leq$ SCH $\leq$ 450
C = .1 when 451 $\leq$ SCH $\leq$ 525
C = .2 when 526 $\leq$ SCH $\leq$ 600
C = .3 when 601 $\leq$ SCH $\leq$ 675

(4) Number of Preparations

Let P equal the number of preparations. Multiply C by Q and add the result to B where C is specified as follows:

C = -.1 when P $<$ 2*
C = 0 when 2 $\leq$ P $\leq$ 3
C = .1 when P $>$ 3

*When the range of knowledge/ability within a one-preparation assignment is so diverse as to require group/individual instruction within the class, the value of C should be changed to 0.

(5) Night and Saturday Classes

Multiply the number of credit hours assigned to each course offered in the evening or on Saturday by C and add the result to B where C is specified as follows:

C = .35 when the evening class is taught on-campus
C = 1.0 when the evening class is taught off-campus
C = .35 when the Saturday class is taught on-campus and does not require the faculty member to teach 6 days
C = .70 when the Saturday class requires the faculty member to teach 6 days

(6) New Courses

If an instructor is teaching a course which is being offered for the first time by the college, multiply the number of credit hours assigned to the course by .3 and add the result to B.

(7) Radio-TV

If the instructor is required to prepare lectures and record for production, multiply the number of credit hours assigned to the course by 1.0 and add the result to B.

(8) Advisees

Let A equal the number of advisees assigned to the instructor. Multiply C by Q and add the result to B where C is specified as follows:

C = 0 when $A \leq 20$
C = .03 when $21 \leq A \leq 25$
C = .05 when $26 \leq A \leq 30$

(9) Delegate To Chancellor's Advisory Committee

If the faculty member is serving as a delegate to the Chancellor's Advisory Committee, multiply Q by .1 and add the result to B.

The recommendations of the Faculty Forum are that a teacher's workload for a given quarter is to be considered: (1) an underload if F (the number of equated hours in B) is less than 14, (2) a normal load if F is between 14 and 16, inclusively, and (3) an overload if F is greater than 16.

Institutional Research Office Guidelines

The formula recommended by the IRO for determining teaching loads is based on the unit concept. The concept is similar to one adopted for a year's trial run by the University of Rhode Island (Shay, 1974). Under the unit concept a specified number of work units is assigned to each variable which affects the teaching workload. The workload is then quantified by summing the total number of work units. The number of units assigned to each variable is often determined by a concensus of the parties involved (for example, the instructor, the division chairman, and the dean). The unit concept is especially appealing to some educators because it does not limit or confine the measure of workload to the interpretation of hours produced or worked.

A workload is relatively easy to measure by means of the unit concept. One simply finds the total number of work units (D) by adding the units

assigned to each variable. The IRS recommends the following units for each variable:

(1) Contact Hours (CT)

4 units if $CT < 15$
8 units if $15 \leq CT \leq 20$
12 units if $CT > 20$

(2) Credit Hours (CR)*

4 units if $CR < 12$
8 units if $12 \leq CR \leq 15$
12 units if $CR > 15$

*Credit hours assigned to independent study courses should not be counted.

(3) Preparations (P)

2 units if $P < 2$
4 units if $2 \leq P \leq 3$
6 units if $P > 3$

(4) Full-time Equated Students (FTE)*

2 units if $FTE < 15$
4 units if $15 \leq FTE \leq 20$
6 units if $FTE > 20$

*FTE = (Credit Hours Assigned to Course X Number Enrolled)/15

(5) Evening Classes

1 unit if the evening class is taught on-campus
2 units if the evening class is taught off-campus

(6) Saturday Classes

2 units if the Saturday class requires the faculty member to teach 6 days
1 unit otherwise

(7) Radio-TV Classes

2 units

(8) Advisees (A)

1 unit if $0 < A \leq 20$
2 units if $21 \leq A \leq 25$
3 units if $A > 25$

The recommendations of the IRO are that a teacher's workload for a given quarter is to be considered: (1) an underload if D (the total number of work units) is less than 20, (2) a normal load if D is greater than 19 but less than 30, and (3) an overload if D is greater than or equal to 30.

Comparisons Between the Workload Formulae

One of the criteria on which a workload formula should be judged is the ease with which it can be applied. Despite initial appearances both the Forum formula and the Drew formula are relatively easy to apply. For illustration, consider the case of Instructor X whose workload is described below and who would be considered to have a normal load by VCCS guidelines.

Instructor X[a]

Courses	Credit Hours	Contact Hours	Number of Students	SCH	FTE
English 101[b]	3	5	20	100	4.0
English 102	3	3	15	45	3.0
English 121	3	3	25	75	5.0
English 122	3	3	28	84	5.6
TOTALS	12	14	88	304	17.6

a. Instructor X has 22 advisees and is not a delegate to the Chancellor's Advisory Committee.

b. On-campus evening class

By the Forum formula, Instructor X carries a faculty workload of F = 16.61 which is considered an overload. F is determined as follows:

Variable	Amount Added to Data Bank
Contact Hours - 14	14
Credit Hours - 12 = Q	-
SCH - 304	0(Q) = 0
Preparations - 4	.1(Q)= 1.2
On-campus Evening Class	.35(3) = 1.05
Advisees - 22	.03(Q) = .36
TOTAL	16.61

By the Drew formula, Instructor X carries a faculty workload of D = 25 which is considered a normal load. D is determined as follows:

(1) 8 units for 12 credit hours
(2) 4 units for 14 contact hours
(3) 6 units for 4 preparations
(4) 4 units for 17.6 FTES
(5) 1 unit for the evening class
(6) 2 units for 22 advisees
TOTAL D = 25

The most important criterion on which a workload formula should be judged is its compatibility with acceptable workload views. Thus, if a given workload is accepted as being normal, then any quantification of this workload should produce a measure which also carries a normal rating. The Forum and Drew formulae differ significantly on this criterion. The data in the appendix shows how these formulae compare with the VCCS workload guidelines when applied to the teaching loads of 30 VWCC faculty members in the 1974 spring quarter. The data shows that by VCCS guidelines 3 of the faculty members would be classified as having an underload, 22 as having a normal load, and 5 as having an overload. It also shows that 10 of the teachers (33%) would have a compatible rating on the Forum scale while 27 of the teachers (90%) would have a compatible rating on the Drew scale. The areas in which the classifications differ are shown in Table 1. Table 1 shows, for example, that out of the group of 22 faculty members who received a normal load rating by the VCCS guidelines, only 3 received a normal load rating on the Forum scale. The rest received either an underload rating (3) or an overload rating (16). The data in Table 1 suggests that if a faculty member receives an underload or an overload rating by the VCCS guidelines, he is very likely to receive a compatible rating on both the Forum and Drew scales. The primary differences between the scales occur with respect to faculty members who receive a normal load rating by VCCS guidelines.

Table 1

Comparisons Between the Workload Formulae

	Number of Faculty Members*			
	Underload	Normal Load	Overload	Total
VCCS Rating	3	22	5	30
Forum Rating				
Underload	2	3	0	5
Normal Load	1	3	0	4
Overload	0	16	5	21
Drew Rating				
Underload	3	0	0	3
Normal Load	0	19	0	19
Overload	0	3	5	8

*Classifications based on the data given in the Appendix.

SUMMARY

Faculty workload should not be measured solely on the basis of contact or credit hours. With this premise in mind, considerable efforts were expended at VWCC during the 1973-1974 academic year toward the construction of a formula which would quantify the effects of the different variables that affect faculty workload. The efforts produced two formulae, the Forum formula developed by a committee of the Faculty Forum and the Drew formula developed by the Institutional Research Office. The formulae were tested by measuring the faculty workloads of a sample of 30 VWCC faculty members. The measurements revealed that both of the formulae were easy to apply, but that often the workload classification of a faculty member would depend upon which formula was being applied. The workload of each faculty member was classified as underload, normal load, or overload by means of existing VCCS workload guidelines. The classifications were then compared with those that resulted from using the Forum formula and with those which resulted from using the Drew formula. The Forum formula and VCCS guidelines

produced incompatible classifications 67% of the time while the Drew formula and the VCCS guidelines produced incompatible classifications only 10% of the time. In almost all cases where the classifications differed, the faculty member received a higher classification rank when the Forum formula or Drew formula was applied than when the VCCS guidelines were applied.

CONCLUSION

The adoption of a workload formula must ultimately be decided on the basis of how well it quantifies accepted workload guidelines. If a particular type of load is recognized and accepted in its unquantified form as a normal load, then an institution would certainly not want to adopt a workload formula which classified that type of load as abnormal. The value of a workload formula must be weighed in the market place where it will be employed. Since faculty workload guidelines often vary from one institution to another, a particular workload formula might be rejected by some institutions and accepted by others.

At VWCC the next logical step in the school's effort to develop a faculty workload formula would be the formulation of a committee to review the two formulas which have been developed. The committee should be composed of both administrators and faculty members. One of the first tasks should be the establishment of the guidelines by which the workload formulas will be judged. Even if the committee decides that neither formula adequately measures the established view of faculty workload at VWCC, and that, hence, neither formula is adaptable to VWCC's needs, the efforts expended in the development of the formulas would not have been in vain. The formulas might be of use to other institutions. And besides, future successes are often built on the basis of knowledge gained by past failures.

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Appendix

Application of Workload Formulae To

A Sample of 30 VWCC Faculty Members

Who Taught During the Spring 1974 Quarter

Faculty Workloads - Science and Business Division

Science Div.	Contact Hours	Credit Hours	Student Class Hrs.	FTES	No. of Preps	On-Campus Night/Sat. Cl.	No. of Advisees	Forum Fmla. F	Forum Fmla. Load	Drew Fmla. D	Drew Fmla. Load	VCCS Load
1	18	12	228	9	2		a	18.00	0	23	n	n
2	24	17	330	16	4	5 Hrs.	a	29.15	0	36	o	0
3	24	16	284	19	2		a	24.00	0	33	0	0
4	18	12	420	19	3	4 Hrs.	a	19.40	0	26	n	n
5[d]	9	9	90	6	3	3 Hrs.	a	12.15	u	18	u	u
6	20	19	355	23	4		a	23.8	0	33	0	0
Business Div.												
7	13	13	213	14	4	3 Hrs.	b	17.04	0	21	n	n
8	17	16	377	25	3	3 Hrs.	b	18.53	0	33	0	0
9	15	13	317	17	3		b	15.39	n	28	n	n
10	15	15	360	24	4	3 Hrs.	b	19.50	0	31	0	n
11	15	15	450	30	3	3 Hrs.	b	16.50	0	29	n	n
12[e]	12	12	324	21	4	3 Hrs.	b	16.61	0	27	n	n

a. Between 1 and 20, inclusively
b. Between 21 and 25, inclusively
c. Over 25
d. Has a 3 hour off-campus course
e. Delegate to Chancellor's Advisory Committee

u. Underload
n. Normal load
o. Over load

Faculty Workloads - Social Science and Humanities Division

Soc. Sci. Div.	Contact Hours	Credit Hours	Student Class Hrs.	FTES	No. of Preps	On-Campus Night/Sat. Cl.	No. of Advisees	Forum Fmla. F	Forum Fmla. Load	Drew Fmla. D	Drew Fmla. Load	VCCS Load
13[d]	15	15	276	18	2	3 Hrs.	b	19.50	0	29	n	n
14	12	12	282	18	2	3 Hrs.	a	13.05	u	22	n	n
15[e]	15	15	465	30	3	3 Hrs.	a	20.55	0	30	0	n
16	15[f]	15[f]	292	20	3	3 Hrs.	b	19.74	0	27	n	n
17[d]	11[f]	12[f]	469	33	3	3 Hrs.	c	17.30	0	28	n	n
18	13	13	305	20	3		a	13.00	u	21	n	n
Humanities Div.												
19	20	18	302	21	2		a	20.00	0	31	0	0
20	18[g]	8[g]	236	7	3	5 Hrs.	b	20.02	0	25	n	n
21	15	15	318	22	4	3 Hrs.	a	19.05	0	30	0	n
22	15	15	381	25	3	3 Hrs.	a	17.10	0	29	n	n
23[e]	14	14	182	12	3	3 Hrs.	a	18.70	0	23	n	n
24	9	9	153	11	2	6 Hrs.	a	10.2	u	17	u	u

a. Between 1 and 20, inclusively
b. Between 21 and 25, inclusively
c. Over 25
d. Has a 3 hour Radio Course
e. Has a 3 hour off-campus course
f. Also has 1 additional contact hour and 31 additional credit hours in an independent study course
g. Also has 3 additional contact hours and 1 additional credit hour in an independent study course
h. Saturday class that requires teacher to work 6 days

u. Underload
n. Normal load
o. Overload

Faculty Workloads - Engineering & Technical Divison

Div. of Engr./Tech.	Contact Hours	Credit Hours	Student Class Hrs.	FTES	No. of Preps	On-Campus Night/Sat. Cl.	No. of Advisees	Forum Fmla. F	Forum Fmla. Load	Drew Fmla. D	Drew Fmla. Load	VCCS Load
25	16	8	348	10	4	2 Hrs.	a	17.50	0	22	n	n
26	31	12	558	15	3		a	33.40	0	29	n	n
27	13	11	189	10	4	3 Hrs.	a	15.15	n	18	u	u
28	15	10	213	9	3		c	14.50	n	21	n	n
29	14[d]	6[d]	168	5	1	3 Hrs.	c	13.70	u	24	n	n
30	12	12	150	10	3	3 Hrs.	a	11.85	u	20	n	n

a. Between 1 and 20, inclusively
b. Between 21 and 25, inclusively
c. Over 25
d. Also has 7 additional contact hours and 3 additional credit hours in an independent study course.

u. Underload
n. Normal load
o. Overload

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